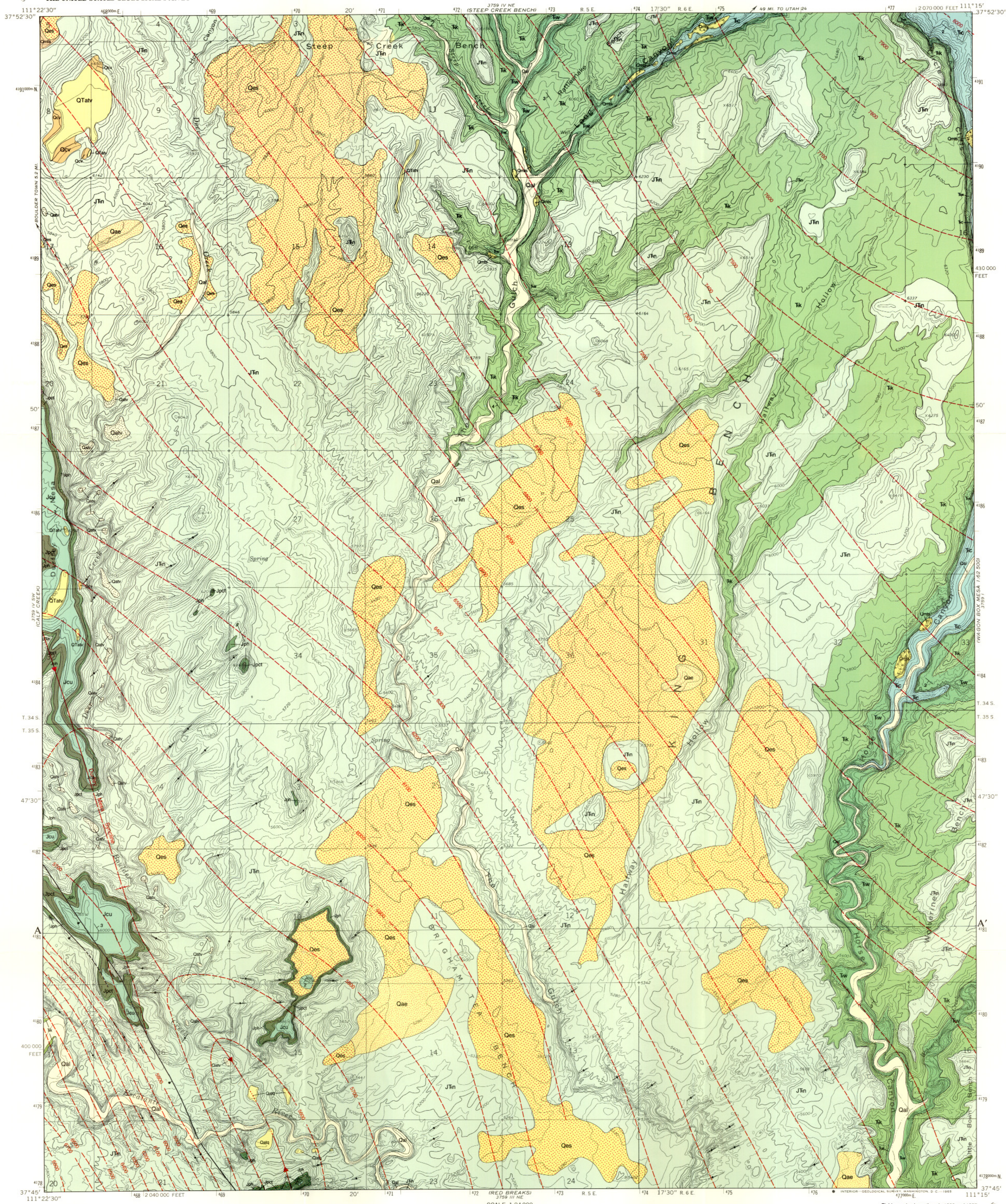
UTAH GEOLOGICAL AND MINERAL SURVEY
UTAH DEPARTMENT OF NATURAL RESOURCES
in cooperation with
THE UNITED STATES GEOLOGICAL SURVEY

Plate 1
Utah Geological and Mineral Survey Map 119
Geologic Map of the King Bench Quadrangle



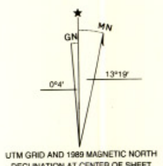
Base map from U.S. Geological Survey,
King Bench Quadrangle 1964

Field mapping by authors in 1980 and 1987
Kent D. Brown, Cartographer

SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL



UTM GRID AND 1989 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

GEOLOGIC MAP OF THE KING BENCH QUADRANGLE, GARFIELD COUNTY, UTAH

by
Gordon W. Weir and L. Sue Beard
U.S. Geological Survey

1990

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Plate 2
Utah Geological and Mineral Survey Map 119
Geologic Map of the King Bench Quadrangle

MAP SYMBOLS

CONTACT — Boundaries of surficial deposits approximately located.

FAULT — Dashed where inferred; dotted where concealed; bar and ball on downthrown side. Arrows on cross section indicate direction of relative movement.

SYNCLINE — Showing trace of axial plane and plunge of axis; dashed where approximately located.

STRIKE AND DIP OF BEDS

Inclined

STRIKE OF VERTICAL AND NEAR-VERTICAL JOINTS

STRUCTURE CONTOURS — Drawn on top of Navajo Sandstone. Long dashed where control less accurate. Short dashed where datum above land surface. Contours omitted in northeast sector because of insufficient data. Contour interval 100 ft.

DESCRIPTION OF MAP UNITS

Qal — Floodplain alluvium — *Fine sand and silt and local admixtures of gravel.*

Qes — Eolian sand — *Fine to very fine sand and silt.*

Qae — Sheetwash alluvium and eolium — *Silt, sand, and small rock fragments.*

Qmfa — Volcanic-gravel debris-flow colluvium and alluvium — *Angular to rounded clasts of basaltic andesite in unsorted colluvium that grades downslope to well-sorted alluvium.*

Qmts — Sandstone talus — *Rockfalls of blocks and slabs of sandstone from the Kayenta Formation and Wingate Sandstone.*

Qcv — Volcanic-gravel colluvium — *Rounded clasts of basaltic andesite chiefly on steep slopes.*

Qatv — Volcanic-gravel terrace alluvium — *Pebbles to boulders of basaltic andesite and small amounts of clasts of sandstone as much as 200 feet above Deer and Boulder Creeks.*

Qatq — Quartzite-gravel terrace alluvium — *Chiefly well-rounded cobbles of quartzite and lesser amounts of basaltic andesite and other resistant rocks on benches as much as 300 feet above the Escalante River.*

QTatv — High volcanic-gravel terrace alluvium — *Pebbles to boulders of basaltic andesite and small amounts of pebbles to cobbles of chert and sandstone on a pre-canyon surface more than 650 feet above stream level.*

UNCONFORMITY

Jcu — Upper member of the Carmell Formation — *Reddish-brown shale, and reddish-brown and yellowish-gray, very fine to fine-grained sandstone.*

Jpct — Thousand Pockets Tongue of the Page Sandstone — *Chiefly yellowish-gray to very light gray, fine- to medium-grained sandstone; commonly contorted. Combined in map unit with underlying Judd Hollow Tongue of the Carmel Formation.*

Judd Hollow Tongue of the Carmel Formation — *Moderate-reddish-brown siltstone and light-gray to reddish-brown, fine-grained sandstone; commonly contorted.*

Jph — Harris Wash Tongue of the Page Sandstone — *Grayish-orange, crossbedded fine-grained sandstone.*

UNCONFORMITY

JTin — Navajo Sandstone — *Chiefly grayish-orange, crossbedded, fine-grained sandstone.*

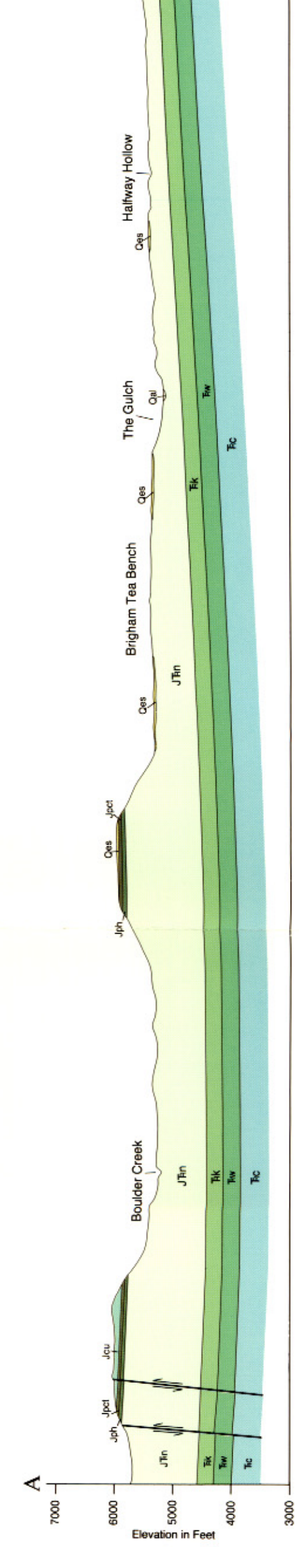
Tik — Kayenta Formation — *Grayish-red to dusky-red, fine-grained sandstone interbedded with lesser amounts of dusky-red siltstone.*

Trw — Wingate Sandstone — *Grayish-red to grayish-orange, crossbedded, fine-grained sandstone.*

UNCONFORMITY

Trc — Chinle Formation — *Reddish-gray, purplish-gray, and greenish-gray mudstone and siltstone and pale-red to reddish-brown, fine- to medium-grained sandstone.*

FORMATION	SYMBOL	THICKNESS (feet)	LITHOLOGY
Surficial deposits	Q	0-30	
High volcanic-gravel terrace alluvium	QTatv	0-30	
Upper member Carmel Formation	Jcu	180+	
Thousand Pockets Tongue of the Page Sandstone	Jpct	30-60	
Judd Hollow Tongue of the Carmel Formation		20-40	50-90
Harris Wash Tongue of the Page Sandstone	Jph	40-90	
Navajo Sandstone	JTin	1000-1500	
Kayenta Formation	Tik	200-300	
Wingate Sandstone	Trw	250-350	
Chinle Formation	Trc	500+	



CORRELATION OF MAP UNITS